

Looking for a Way to Improve Your Behavior Analysis Lectures? Try Guided Notes

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Lecturing continues to be one of the most commonly used instructional approaches at the college level despite its wide criticism (Cuban, 1984; Eggen & Kauchak, 1992). There are several advantages to lecturing and reasons for its continued use. Lecturing is simple and straightforward. Although presentation styles differ, the basic format is that the instructor talks (sometimes from notes), writes occasional key points on the chalkboard or overhead projector, and asks and responds to questions. Lecturing is relatively efficient in terms of the instructor's time. Once lectures are developed, planning time is devoted only to periodic updates. For example, the basic components of a lecture on operant reinforcement require little change each time the lesson is taught (e.g., definition, types of potential reinforcement, selection of potential reinforcers, factors influencing reinforcers). Lecturing is versatile. Well-designed lectures can provide large (and small) groups of students with a great deal of information in limited amounts of class time, can be used to teach virtually any content area, and can last anywhere from a few minutes to several hours.

Lecturing can be used to supplement or elaborate on especially difficult text material or inadequate sections of the course textbook or assigned reading (Michael, 1994). After reading about extinction, for example, some students

believe its application in applied settings is a simple process. An instructor could discuss personal experiences with the difficulties encountered in consistently withholding all sources of reinforcement for the target behavior, as well as specific examples of behavior getting worse before it gets better. Lectures can be interactive. A lecturer can continually check for understanding by asking frequent questions and reading the audience, allowing the instructor to make adjustments as the lecture proceeds. Finally, lecturing can be personal. Some students, particularly when learning new and difficult material, seem to respond well to the personal interactions provided through lecturing with discussion.

Although there are several advantages to lecturing, most of the criticism leveled against it is warranted. Some of the most knowledgeable instructors' lectures are often less than inspiring, sometimes even boring. Consequently, student attention drifts. During lectures the instructor generally does the majority of the speaking while the students passively attend, resulting in low active student involvement. Research consistently suggests that students learn more when they are actively involved in the teaching-learning process (e.g., Fisher & Berliner, 1985; Greenwood, Delquadri, & Hall, 1984). Throughout each lecture, students are expected to (a) listen to the presentation, (b) identify and write down the key points, (c) respond to instructor questions, (d) ask for clarification when needed, and (e) add original comments. This is a tall order for many students, particularly during lectures in behavior analysis courses that introduce and use new technical vocabu-

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lary. Some students attempt to write down almost every word said, limiting their ability to participate in class discussions and understand the material presented. Other students take the opposite approach and take few, if any, notes during the lecture due to difficulty in listening, identifying key points, and writing at the same time.

The low active student involvement and note-taking difficulties encountered by many students make traditional lecturing an ineffective method of instruction. Instructors can reduce or eliminate these problems by developing and using guided notes to accompany their lecture presentations.

WHAT ARE GUIDED NOTES?

Guided notes are handouts that guide students through a lecture by providing a format that includes basic background information with standard cues and space for students to write the key points (Heward, 1994; see Figures 1 and 2). The instructor lectures on key concepts, facts, and relations, accompanying the oral presentation and demonstrations with overhead transparencies. Students fill in the key points during the lecture. Because the key points are not included in the guided notes handout, students must pay attention to and make active responses concerning the lesson's content in order to complete their notes. Guided notes can be developed to accompany a single lesson or as a module for an entire course.

WHY USE GUIDED NOTES?

Lecture presentations with guided notes provide advantages to both students and instructors.

Student Advantages

Guided notes are designed to greatly reduce, if not eliminate, students' note-taking problems such as "What should I write?" and "What's the best way to organize what I write?" Key points are projected on a screen, reducing the problem of what to write, and consis-

tent cues in the guided notes help students with organization. Important background information is included in the guided notes, so students have to write only the key points, thereby increasing their opportunities to listen and participate in the lecture. The structured active responding required by guided notes improves the accuracy of student note taking. Instruction with guided notes seems to increase the quantity and quality of in-class questions. Students often use their notes to formulate in-class questions. Having more accurate notes increases confidence in asking questions. Guided notes also provide a standard set of notes to prepare for exams, increasing the likelihood that students will study the right things. (Research has consistently found increased academic achievement by elementary and secondary students when using guided notes; see Heward, 1994, for a review.)

Instructor Advantages

Instruction with guided notes provides the instructor with both immediate (during each lecture) and long-term advantages (each time the course is taught). First and foremost, guided notes are developed ahead of time, facilitating preparedness. The basic content and structure of the lesson exist within the guided notes, thus providing the instructor with both content and sequence prompts during the lecture. Following lengthy class discussions, the instructor can easily refer to the guided notes to identify the point at which the lecture should continue. He or she can, likewise, easily locate the point at which the next class lecture should begin. Because guided notes contain the key points presented in each lesson, test development is simpler, and tests are more likely to match the content covered in the lectures. Although the initial development of guided notes takes time, periodic revisions and updates are easily accomplished if they were produced on a computer.

Unit I
Roots of Applied Behavior Analysis

I. APPLIED BEHAVIOR ANALYSIS AS A DISCIPLINE

Applied Behavior Analysis is a discipline devoted to the understanding and improvement of human behavior. But there are other disciplines with similar intent. What sets applied behavior analysis apart? (Cooper, Heron, & Heward, 1987)

- Focus - *socially-significant, objectively defined, observable behavior*
- Goals - *to improve the behavior under study while demonstrating a reliable relation between procedures and behavior change*
- Methodology - *ABA uses the method of science.*

Behavior analysis is an active intervention approach whereby teachers

- Identify the behavior *to be learned/changed*
- Modify *the learning environment(s) to make behavior changes*
- Implement *behavior-change programs*
- Observe and collect *data to evaluate interventions*

Another way to think about it. When used in a classroom setting, behavior analysis is often referred to as:

- *behavior modification*

This term can be confusing. To make behavior changes in your students, what you directly modify or manipulate are variable(s) in the learning environment(s). These modifications make changes in student behavior (We'll talk a lot about this throughout the course). For clarity, instead of behavior modification, perhaps, we should call it

- *environment modification*

Figure 1. Sample guided notes page from an introductory course in applied behavior analysis for teachers. Students write the key points shown in larger italicized font. Key points are presented visually on overhead transparencies as the instructor orally presents additional examples, explanations, and extensions, and responds to student questions and comments.

Unit IV
Arranging Consequences that Increase Behavior

I. THE PRINCIPLE OF REINFORCEMENT

All children exhibit at least some appropriate behaviors each school day. Too often, however, teachers ignore students when they behave appropriately. Let's generate some ideas as to why teachers might not provide positive attention to students when they are behaving appropriately (either academically or socially):

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A. Some important points about reinforcement

- Although many behavior analysts use the principles of reinforcement to change behavior, it is **NOT** true that *reinforcement is an invention of behaviorists*.
- Behaviorists apply what has been learned about reinforcement in a *thoughtful and systematic manner*.

B. Genetics and operant reinforcement

All living organisms inherit biological characteristics through natural selection. Natural selection is the process by which an organism, through genetic mutation,

- *develops and transmits features that increase its chances of survival*.

Humans do **NOT** inherit specific kinds of operant behavior. What they seem to inherit is • *the capacity to learn new behavior*.

The genetic endowment acquired by humans that contributes to operant conditioning is

- *the capacity to be reinforced (or punished) by certain events in the current setting*.

Figure 2. Sample guided notes page from an introductory lesson on reinforcement. Students orally suggest ideas in response to the statement at the top of the page. The instructor comments on and writes the student-generated points on the overhead transparency for all students to see and copy onto their guided notes.

HOW DO I GET STARTED WITH GUIDED NOTES INSTRUCTION?

Developing guided notes to accompany your lecture presentations is relatively straightforward. After clearly specifying your course objectives, develop your guided notes by pulling information and ideas from several sources (e.g., textbooks, journals, presentations) to develop a module designed to help meet those objectives. When first using guided notes in a course, you may need to prepare them on a week-to-week basis. A goal, however, should be a complete guided notes module to accompany all of the lectures for a course. Additional suggestions for developing guided notes include the following:

1. Use a standard outline format to structure guided notes. Relevant background information should be included.
2. Provide consistent cues (e.g., bullets, asterisks, blank lines) so students know where, when, and how many key points or concepts to write.
3. Make certain that students have ample room to write. Ample room is about three to four times the space needed to type or key in the content or information.
4. Don't require students to write too much. It can slow down the lecture. Key points can be partially filled in (e.g., with a complete-the-sentence format as shown at the bottom of Figure 2).
5. Include in your guided notes packet additional in-class activities and homework exercises, such as (a) study guide pages for assigned readings, (b) sections to provide original examples and nonexamples of newly studied principles or concepts, (c) review exercises, (d) quotes from leaders in the field around which to center discussions.
6. Add appendices to your guided notes packet to include additional course materials and information, such as SAFMEDS ("say all fast, a minute

every day shuffle") study cards (Lindsley, 1983, 1993), applied assignments, sample observation forms and graphs, graph paper, assigned readings, and reference lists.

7. Have the guided notes packets three-hole punched and put in a binder for students to purchase.

8. Use overhead transparencies with key points that students are to write. Use a font size that is large enough so that students seated in the back of the classroom can easily read it. Do not make transparencies too wordy or include every word on your transparency that is in the guided notes packet. One useful rule of thumb is not to exceed eight words per horizontal line and eight lines per transparency.

HOW DO I USE GUIDED NOTES TO ACCOMPANY A LECTURE?

During your first class session, tell students how the guided notes will support their note taking, initial understanding, and subsequent study of the lecture's content. The basic procedure is that key lecture points will be projected on the screen and that students are to write these points where cued in the guided notes (e.g., bullet, asterisk). Inform students that they may want to write additional information in their guided notes or write projected key points in their own words as needed. Give your students a method to inform you if and when you are removing transparencies too quickly. A simple raised hand seems to work better than calling out. Encourage your students to ask questions and interject additional comments throughout the lecture. Student participation should not be limited by the guided notes. Because lectures with guided notes will likely be new to your students, a few prompts on their use may be needed during the first few lectures.

While lecturing with guided notes, use a piece of paper to progressively disclose and project each piece of information as it is introduced. When

you wish to point out a part of the transparency, use a pencil or marker to point directly on the transparency instead of turning around and pointing to the screen. When key points are to be generated by students, fill in the transparencies with water-based markers during the presentation itself (to be cleaned for reuse) (see Figure 2, top). Turn off the overhead projector when you want to be sure that students' attention is directed only to what you or a student is saying.

As with your students, you should not be limited by the guided notes. Continue to adjust your lecture based on the needs of your students. Expand your discussions by bringing in additional information, providing new examples, and asking frequent questions. Require students to generate novel examples of the concepts and principles being introduced. Also interject other types of activities. There are several effective instructional strategies to consider, including the personalized system of instruction, response cards (i.e., cards or signs that students hold up in unison to instructor's questions), case simulations, small group intervention projects, frequent exams, SAFMEDS, and graphing activities (e.g., Heward, 1994; Lindsley, 1983, 1993; Lloyd & Lloyd, 1992; Malott, 1984; Michael, 1994; Potts, Eshleman, & Cooper, 1993, for additional information).

CONCLUDING REMARKS

Guided notes can improve the quality of your course lectures. Guided notes, however, are only one part of your total instructional effort; they are not a stand-alone intervention. Lecturing, even when enhanced with guided notes, is a relatively ineffective method of instruction if used exclusively. Just using guided notes in isolation will not make a poor course a good course.

One final comment, or perhaps a word of caution, is warranted. Students like guided notes. Once they have been

exposed to guided notes, they typically request that you continue to use them in all of your courses. When this happens, observe one of the basic tenets of behavioral teaching, "The learner knows best."

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